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Department of Environmental Protection  
Bureau of Water Protection and Land Reuse  
Planning and Standards Division  
79 Elm Street  
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**Testimony in support of the Proposed Stream Flow Standards and Regulations**

Mr. Stacey,

Thank you for providing an opportunity for me to comment on the Proposed Stream Flow Standards and Regulations. This written testimony is being submitted as an addendum to the oral testimony I provided during the public hearing on January 21.

As a Board member of the Mianus Chapter of Trout Unlimited, I am writing today to express my support for the Proposed Stream Flow Standards and Regulations.

Our chapter represents more than 500 members living in the towns of Greenwich, Stamford, Darien, New Canaan, Wilton, Norwalk, Ridgefield and Redding, and has been actively involved in working to preserve, protect and restore the coldwater habitat of our local rivers and streams.

Since 1996, I have volunteered on our river restoration projects. Since 2003, I have chaired the Restoration Committee of the Mianus Chapter of Trout Unlimited, managing the planning of our restoration projects on the Norwalk and Mianus Rivers and coordinating the financing and volunteer labor necessary.

Our Chapter's members are a dedicated group of conservationists passionate about Connecticut's water quality and ecology. Many thousands of hours of volunteer work has gone into our restoration projects, with great results.

On the Norwalk River, we have seen a resurgence in the wild brown trout population that is a clear sign of the benefits of our work. This year, I personally witnessed several pairs of adult brown trout in spawning activity and saw clear signs of additional spawning.

That the Norwalk River, a river listed as threatened by the DEP, can provide habitat for wild spawning brown trout is a constant wonder to me. The value of wild trout in our rivers and streams across the state can not be overstated.

As an organization, Trout Unlimited's mission in Connecticut is to preserve, protect and restore the state's coldwater resources. We accomplish this mission through: Protecting our water resources; Reconnecting fragmented habitat to open entire river systems to spawning; Restoring damaged and degraded river sections to provide year-round habitat for trout and aquatic species; Sustaining these efforts

through our education and outreach to Connecticut residents to help them understand the importance of good stewardship and the inherent value of our coldwater resources.

Much of our success is owed to the close partnership, guidance and funding of the Connecticut Department of Environmental Protection and its dedicated and experienced staff. We look forward to continued collaborative efforts to protect, restore and improve our local rivers.

The importance of the Proposed Stream Flow Standards and Regulations, and the impact they will have of improving the quality of one of our state's most precious natural resources, cannot be emphasized enough.

**The proposed regulations have been a long time in coming**

Connecticut's current regulations date back to 1979 and are grossly outdated. It has been widely acknowledged that the standards set at that time were created under inadequate scientific study and were not advised with the benefit of today's advanced understanding of coldwater ecological needs.

In 2005, the state legislature recognized the many gaps in our state's stream flow regulations and enacted legislation that sought to close these gaps and address the need to balance and improve water use in Connecticut.

I think it is important to note the overwhelming support this legislation received in 2005. The final vote on the bill saw just one member of the legislature casting a ballot in opposition. Through all of the Committee votes, I believe there were only three votes against the legislation. It is rare indeed to have such near-unanimous support for a piece of legislation in our state.

Over the past four years, your department's staff and the Commissioner's Advisory Group carefully considered the many uses of our water resources and worked to draft proposed regulations which balanced the human needs with the ecological requirements of healthy river systems. We thank you for your careful and conscientious work.

Given the 30 years since Connecticut's regulations were last modified, the time is now to implement stream flow standards which will help preserve and improve the state's rivers and streams while providing protection to water supplies for human needs.

**The proposed regulations are vital to protecting our rivers and streams**

Water in Connecticut is a public resource, held in trust for the citizens of the state, and protected and preserved for a myriad of uses.

With average annual precipitation of 45 inches, Connecticut is blessed with abundant water resources. There is plenty of water to go around, if managed

correctly, and these regulations will help lead the way to improved water management in the state.

Along with consumption, industry and agriculture, the recreational use of Connecticut's rivers and streams is a quality of life issue important to our state's residents. This recreational use is also an economic boon to the state and to local business.

But the current regulations do not adequately protect the fragile ecology of our rivers and streams.

Rivers in Connecticut already face an abundance of threats. Habitat fragmentation due to dams, culverts and other passage barriers prevent trout and other aquatic inhabitants from traveling within river systems, a vital component of spawning and survival. Ever-increasing development throughout our watersheds and along our watercourses has added a slew of challenges such as non-point source pollution, unnatural temperature variances, increased groundwater withdrawals and more.

While these threats can be, and are being addressed through Trout Unlimited's active advocacy, education, outreach and restoration initiatives, the one key aspect of a healthy river system that cannot be adequately addressed at the grass-roots level is the presence of natural water flows. These regulations are the only way to ensure that a consistent, natural flow will exist in all of Connecticut's rivers and streams, providing the needed habitat to allow trout and other species to survive and thrive.

I have seen the importance of adequate stream flows first-hand. Following several of our restoration projects, our local rivers experienced significant improvements in wild trout population densities, survival and spawning activity, a clear sign of improving habitat and ecological conditions. All of this work and effort, however, can – and has – been quickly undone when water flows remain unnaturally low during the critical Rearing and Growing bioperiod.

Just one or two years of low flow, or worse a complete desiccation of a stretch of river, can devastate a wild trout population with impacts which will take many years and decades to reverse. In some cases, a single, significant low flow incident can mean the death knell to the fragile life in a river or stream.

### **The proposed regulations are a significant step forward**

The first, and perhaps most significant aspect of the proposed regulations is that they will apply to every river and stream in Connecticut.

The existing regulations, aimed at the state's stocked streams, do not protect the native and wild trout and other aquatic life that have managed to survive despite the impacts of human development and encroachment. These naturally existing populations and habitats are the most important to protect and improve.

The proposed regulations also require more protective stream flows, which more closely match the natural flow patterns. In working to preserve, protect and restore the natural river ecology, there is nothing more important than stream flows which follow the region's natural hydrography.

Our native aquatic species have evolved over the millennium to take advantage of Connecticut's unique stream flow patterns and do best when such conditions exist. Clearly the most critical period is the Rearing and Growing bioperiod, when unnaturally low flows can cause significant population mortality. But also important are the high flow periods, when an abundance of precipitation allows for the rivers and streams to naturally flush out sedimentation, redistribute vital nutrients throughout the river system and build the habitat and structure needed for a healthy ecosystem.

Unfortunately, water retention and diversion has led to significant changes in the natural flows of our state's rivers and streams. The low flow periods now last longer and reach lower levels than ever before. The high flow periods are shorter and more abrupt.

Returning our streams to a more natural flow pattern will have a significant impact on the quality and health of the ecosystem.

Also crucial to the success of the proposed regulations is the inclusion of standards for groundwater withdrawal.

The majority of our suburban and rural residents depend on groundwater because Connecticut law presently prohibits drinking water to be taken from surface water systems, such as our lakes and larger rivers that receive certain discharges. That puts enormous pressure on groundwater reserves and on those few clear streams that receive no discharges and which often support wild trout.

Careful study, implementation and monitoring of the cumulative effects of groundwater withdrawals on the stream flows of rivers throughout the state is vital to ensuring these regulations have their desired effect.

### **The proposed regulations will be realistically implemented**

While the proposed regulations require significant changes to the management of Connecticut's water resources, they will be phased in so as to limit the challenges of accomplishing the required classification and implementation steps.

The new regulations recognize the varied viability and ecological conditions of the many rivers and streams throughout the state and include a classification system that provides a sliding scale of stream flow protections based on a number of criteria.

are exempt under the regulations, but in some cases, the cumulative effect of two or three such withdrawals could be devastating to a small stream.

Particularly for Class 1 and Class 2 streams, where there is a strong possibility of wild spawning, the regulations should include a maximum cap on the cumulative groundwater withdrawal allowed in a specific area around these streams. If too many water users begin drawing from the same source at the headwaters of one of these pristine streams, the subsequent loss of groundwater discharge into the stream could result in extremely low flows or complete stream dessication.

Also included in the proposed regulations is a Class 4 designation that is specified for rivers exhibiting "substantially altered stream flow conditions caused by human activity." Among the stream flow requirements for a Class 4 river in the proposed regulations is the release "the greater of 0.1 cfsm."

This limited stream flow requirement is inadequate to protect rivers designated as Class 4. While the ecological health of such streams may be diminished, it is clear that such streams can be, and have been rehabilitated to a condition where aquatic life and recreational value are greatly improved.

At the least, Class 4 designations should include minimum flow standards that allow for the sustenance of the existing ecological conditions and aquatic life, providing an opportunity for future restoration work and future water management advancements. Such limited protections, as are currently included in the proposed regulations, may cause irreparable harm to Class 4 streams, such that they could never be rehabilitated even if the desire, will, financing and technology were available to do so.

Additionally, while the regulations allow for changes in classification should ecological conditions improve in a given river, conspicuously absent from the proposed regulations is any language aimed at actively promoting the improvement of the health of Connecticut's rivers.

Central to Trout Unlimited's mission is the restoration of habitat designed specifically to improve the water quality and ecological health of our local rivers and streams. We have seen how such work can vastly improve even the most challenged river systems and bring an ecological balance back to a river that had previously been degraded.

The proposed regulations should include an emphasis and impetus for the state, consumptive water users, conservation groups and the general public to actively work to improve the health of our state's rivers and streams. This encouragement of river improvement is particularly important for Class 3 and 4 rivers, which can benefit greatly from restoration efforts.

I urge you to include such language in regards to Class 4 designations.

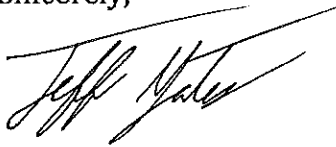
**The proposed regulations are balanced and thoughtful**

In conclusion, the Proposed Stream Flow Standards and Regulations represent an important step in ensuring an abundant supply of water for human use while protecting the ecological needs and recreational enjoyment of Connecticut's rivers and streams.

Balancing these needs is a difficult task, and the proposed regulations admirably create a standard that accounts for that balance.

I would ask that you carefully consider the proposed regulations in light of these and other public comments, with particular attention paid to the classification process, the need to provide at least minimal protection to Class 4 streams and the importance of including within the regulations a specific avenue for improving stream ecology.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Yates", with a long horizontal flourish extending to the right.

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